

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An optical disk from which recorded data are read out by means of light irradiation, comprising:

a substrate comprising recording pits as data on a surface thereof; and

stacked films formed on the substrate, the films comprising a super-resolution film containing a polymer matrix and semiconductor particles including an organic group covalently bonded thereto, and a reflective film reflecting light, the super-resolution film and the reflective film being provided in this order from a light incident side,wherein the semiconductor particles are directly in contact with the polymer matrix.

A (2. (Original) The optical disk according to claim 1, wherein the semiconductor particle comprises at least one semiconductor material selected from the group consisting of CdS, CdSe, Cd_xSe_{1-x}, ZnSe, ZnS, ZnS_xSe_{1-x}, Cd_xZn_{1-x} S, Cd_xZn_{1-x} Se, GaN, Ga_xIn_{1-x} N, ZnO, CuCl, HgI₂ and PbI₂, where 0<x<1.

3. (Currently Amended) The optical disk according to claim 1, wherein a halogen halogen content of the organic group is 1 mol % or less.

4. (Original) The optical disk according to claim 1, wherein the organic group is selected

from the group consisting of an alkyl group, a residual moiety of a silane compound, a residual moiety of a thiol compound and a residual moiety of a dendrimer.

5. (Original) The optical disk according to claim 1, wherein the polymer matrix comprises at least one polymer selected from the group consisting of polymethyl methacrylate, polystyrene, polycarbonate, polyvinyl alcohol, polyacetal, polyacrylate and a dendrimer.

6. (Currently Amended) The optical disk according to claim 1, wherein ~~a ratio of polymer that is covalently bonded to the semiconductor particles is 1 mol % or less of even in the case where a part of polymer molecules in the polymer matrix is covalently bonded to the semiconductor particles, a ratio of the polymer molecules bonded to the semiconductor particles is 1 mol % or less of the entire polymer molecules in the polymer matrix.~~

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7. (Original) The optical disk according to claim 1, wherein the semiconductor particles provide particle size distribution that a full width at half maximum is not larger than a modal diameter.

8. (Original) The optical disk according to claim 7, wherein the modal diameter in the particle size distribution of the semiconductor particles is not smaller than 1/4 and not larger than one times as large as a Bohr radius of an exciton of the semiconductor.

9. (Original) The optical disk according to claim 1, wherein the semiconductor particles show exciton emission, and an energy relaxation time of the exciton is not less than 50 psec.

10. (Currently Amended) An optical disk to which data are recorded by means of light irradiation, comprising:

a substrate; and

stacked films formed on the substrate, the films comprising a super-resolution film containing a polymer matrix and semiconductor particles including an organic group covalently bonded thereto, an optical recording layer to which data are recorded, and a reflective film reflecting light, the super-resolution film, the optical recording layer and the reflective film being provided in this order from a light incident side wherein the semiconductor particles are directly in contact with the polymer matrix.

11. (Original) The optical disk according to claim 10, wherein the semiconductor particle comprises at least one semiconductor material selected from the group consisting of CdS, CdSe, Cd_xSe_{1-x}, ZnSe, ZnS, ZnS_xSe_{1-x}, Cd_xZn_{1-x} S, Cd_xZn_{1-x} Se, GaN, Ga_xIn_{1-x} N, ZnO, CuCl, HgI₂ and PbI₂, where 0<x<1.
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12. (Currently Amended) The optical disk according to claim 10, wherein a halogen halogen content of the organic group is 1 mol % or less.

13. (Original) The optical disk according to claim 10, wherein the organic group is selected from the group consisting of an alkyl group, a residual moiety of a silane compound, a residual moiety of a thiol compound and a residual moiety of a dendrimer.

14. (Original) The optical disk according to claim 10, wherein the polymer matrix comprises at least one polymer selected from the group consisting of polymethyl

methacrylate, polystyrene, polycarbonate, polyvinyl alcohol, polyacetal, polyacrylate and a dendrimer.

15. (Currently Amended) The optical disk according to claim 10, ~~a ratio of polymer that is covalently bonded to the semiconductor particles is 1 mol % or less of even in the case where a part of polymer molecules in the polymer matrix is covalently bonded to the semiconductor particles, a ratio of the polymer molecules bonded to the semiconductor particles is 1 mol % or less of the entire polymer molecules in the polymer matrix.~~

16. (Original) The optical disk according to claim 10, wherein the semiconductor particles provide particle size distribution that a full width at half maximum is not larger than a modal diameter.

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17. (Original) The optical disk according to claim 16, wherein the modal diameter in the particle size distribution of the semiconductor particles is not smaller than 1/4 and not larger than one times as large as a Bohr radius of an exciton of the semiconductor.

18. (Original) The optical disk according to claim 10, wherein the semiconductor particles show exciton emission, and an energy relaxation time of the exciton is not less than 50 psec.

19. (Currently Amended) An optical disk from which recorded data are read out by means of light irradiation, comprising:

a substrate comprising recording pits as data on a surface thereof; and

stacked films formed on the substrate, the films comprising a super-resolution film containing a polymer matrix and semiconductor particles including an organic group covalently bonded thereto, and a reflective film reflecting light, the super-resolution film and the reflective film are provided in this order from a light incident side, and a modal diameter in particle size distribution of the semiconductor particles being not smaller than 1/4 and not larger than one times as large as a Bohr radius of an exciton of the semiconductor, wherein the semiconductor particles are directly in contact with the polymer matrix.

20. (Currently Amended) The optical disk according to claim 19, wherein a ratio of polymer that is covalently bonded to the semiconductor particles is 1 mol % or less of even in the case where a part of polymer molecules in the polymer matrix is covalently bonded to the semiconductor particles, a ratio of the polymer molecules bonded to the semiconductor particles is 1 mol % or less of the entire polymer molecules in the polymer matrix.

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21. (Original) The optical disk according to claim 19, wherein the semiconductor particle comprises at least one semiconductor material selected from the group consisting of CdS, CdSe, Cd_xSe_{1-x}, ZnSe, ZnS, ZnS_xSe_{1-x}, Cd_xZn_{1-x}S, Cd_xZn_{1-x}Se, GaN, Ga_xIn_{1-x}N, ZnO, CuCl, HgI₂ and PbI₂, where 0<x<1.

22. (Original) The optical disk according to claim 19, wherein the polymer matrix comprises at least one polymer selected from the group consisting of polymethyl methacrylate, polystyrene, polycarbonate, polyvinyl alcohol, polyacetal, polyacrylate and a dendrimer.

23. (Original) The optical disk according to claim 19, wherein the semiconductor particles

show exciton emission, and an energy relaxation time of the exciton is not less than 50 psec.

24. (Currently Amended) An optical disk to which data are recorded by means of light irradiation, comprising:

a substrate; and

stacked films formed on the substrate, the films comprising a super-resolution film containing a polymer matrix and semiconductor particles including an organic group covalently bonded thereto, an optical recording layer to which data are recorded, and a reflective film reflecting light, the super-resolution film, the optical recording layer and the reflective film being provided in this order from a light incident side, and a modal diameter in particle size distribution of the semiconductor particles being not smaller than 1/4 and not larger than one times as large as a Bohr radius of an exciton of the semiconductor, wherein the semiconductor particles are directly in contact with the polymer matrix.

25. (Currently Amended) The optical disk according to claim 24, wherein a ratio of polymer that is covalently bonded to the semiconductor particles is 1 mol % or less of even in the case where a part of polymer molecules in the polymer matrix is covalently bonded to the semiconductor particles, a ratio of the polymer molecules bonded to the semiconductor particles is 1 mol % or less of the entire polymer molecules in the polymer matrix.

26. (Original) The optical disk according to claim 24, wherein the semiconductor particle comprises at least one semiconductor material selected from the group consisting of CdS, CdSe, CdS_xSe_{1-x}, ZnSe, ZnS, ZnS_xSe_{1-x}, Cd_xZn_{1-x} S, Cd_xZn_{1-x} Se, GaN, Ga_xIn_{1-x} N, ZnO, CuCl, HgI₂ and PbI₂, where 0<x<1.

27. (Original) The optical disk according to claim 24, wherein the polymer matrix comprises at least one polymer selected from the group consisting of polymethyl methacrylate, polystyrene, polycarbonate, polyvinyl alcohol, polyacetal, polyacrylate and a dendrimer.

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28. (Original) The optical disk according to claim 24, wherein the semiconductor particles show exciton emission, and an energy relaxation time of the exciton is not less than 50 psec.